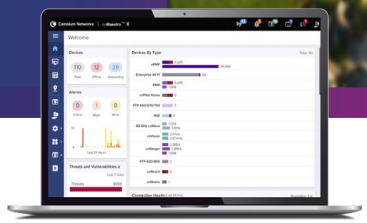
3 GHz 450b

Subscriber and Backhaul

3 GHz 450b Quick Look

- Ultra-wide band radios: 3.3 GHz to 4.2 GHz
- Capable of up to 300 Mbps aggregate in a 40 MHz channel
- Can function as a point-to-point link or as a subscriber module





cnMaestro

The Cambium Networks 450 platform increases performance with the addition of the 3 GHz 450b Subscriber and Backhaul Module.

Key Features

- Gigabit Ethernet interface provides the maximum transfer rates to the device.
- CBRS CBSD Category B device.
- 3.5 mm audio jack allows direct connection of headphones for alignment without any adapters.
- New System on a Chip (SoC) enhances packet processing power more than 4x that of the 450 subscriber module (SM).
- No Encryption models required only for countries with export control license requirements.



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3 GHz 450b Subscriber and Backhaul

Product

High Gain (20 dBi)	Global	No Encryption	4-Pack Antenna Assembly
Model Numbers	C030045B021A	C030045B025A	N030045D001A

Spectrum

Channel Spacing	Configurable on 500 KHz increments
Frequency Range	3300–4200 MHz
Channel Width	5 MHz, 7 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, or 40 MHz

Interface

MAC* Layer	Cambium Networks proprietary
Physical Layer	2x2 MIMO OFDM
Ethernet Interface	100/1000 BaseT, full duplex, rate auto-negotiated, 802.3 compliant
Protocols Used	IPv4, IPv6, UDP, TCP/IP, ICMP, Telnet, SNMP, HTTP, FTP
Network Management	IPv4/IPv6 (dual stack), HTTP, HTTPS, Telnet, FTP, SNMPv2c and v3, cnMaestro™
MTU	1700 bytes
VLAN	802.1ad (DVLAN Q-inQ), 802.1Q with 802.1p priority, dynamic port VID

*Media Access Control

Security

Encryption	FIPS-197 128-bit AES 256-bit AES (requires optional license for attached access point)

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3 GHz 450b Subscriber and Backhaul

Performance

PPS	50,000
ARQ	Yes

Modulation Levels (Adaptive)	MCS	Signal to Noise Required (SNR, in dB)
2X	QPSK	10
4X	16QAM	17
6X	64QAM	24
8X	256QAM	32

Ultimate Sensitivity	-94 dBm
Maximum Deployment Range	Up to 64 km (40 mi) in point-to-multipoint (PMP) mode Up to 200 km (124 mi) in point-to-point (PTP) mode
Latency	3–5 ms, typical
GPS Synchronization	Yes, synchronized by access point or via 3.5 mm port using cnPulse Sync Generator (for PTP mode)
Quality of Service	Diffserve QoS

Antenna

Integrated Antenna Peak Gain	20 dBi
3 dB Beamwidth–Azimuth	12°
3 dB Beamwidth–Elevation	12°
Polarization	Dual slant, ±45
Front-to-Back Isolation	>30 dB
Cross Polarization	>15 dB

Physical

Antenna Accessories	Optional Radome: Part number N000900L021A
Surge Suppression	EN 61000-4-5: 10x700 µs, 4 kV, EN 61000-4-2: ESD 30 kV contact/30 kV air
Mean Time Between Failure	>40 Years
Environmental	IP55; optional glands to enhance to IP67: Part number N000000L135A
Temperature / Humidity	-40°C to 60°C (-40°F to 140°F), 0–95% non-condensing
Weight	3.1 kg (7 lb) (includes mounting bracket)
Wind Survival	200 kph (124 mph)
Dimensions (Diameter x Depth)	45 cm x 28 cm (17.8 in x 11.2 in)
Pole Diameter Range (w/ included mount)	2.5 cm to 7.6 cm (1 in to 3 in) ± 20° mechanical tilt
Power Consumption	12 W typical, 15 W peak
Input Voltage	20–32 VDC, Canopy-style PoE

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3 GHz 450b Subscriber and Backhaul

Link Budget

Transmit Power Range	56 dB dynamic range (to EIRP limit by region) (1 dB step)
Maximum Transmit Power	+29 dBm (MIMO, combined polarities)

Certifications

ISED Canada	109W-0053 (RSS-192, RSS-198)
FCC ID	Z8H89FT0053
ETSI	EN 302 326-2



Front



Back





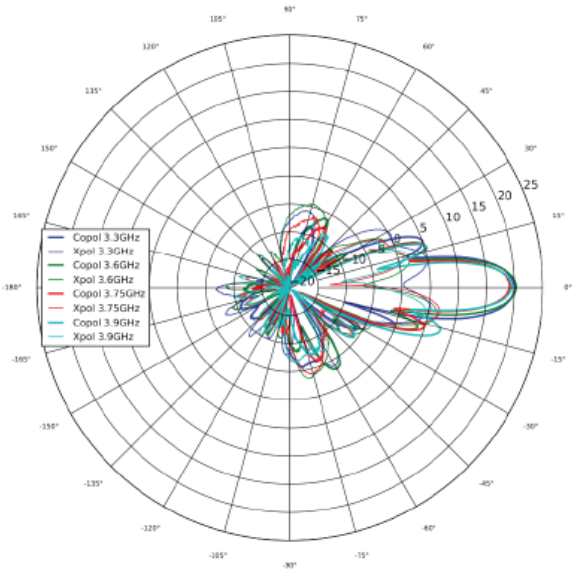
Sides

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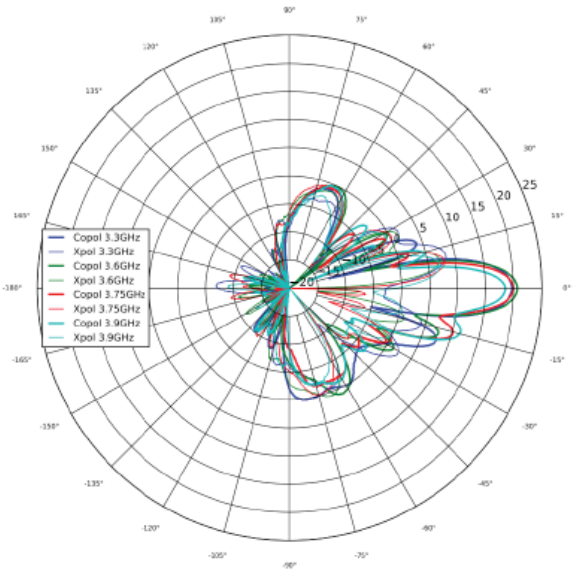
3 GHz 450b Subscriber and Backhaul

High-Gain Antenna Patterns

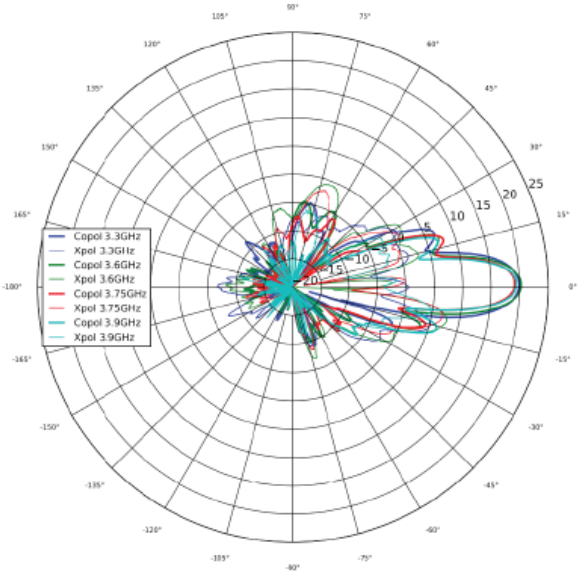
Azimuth, +45



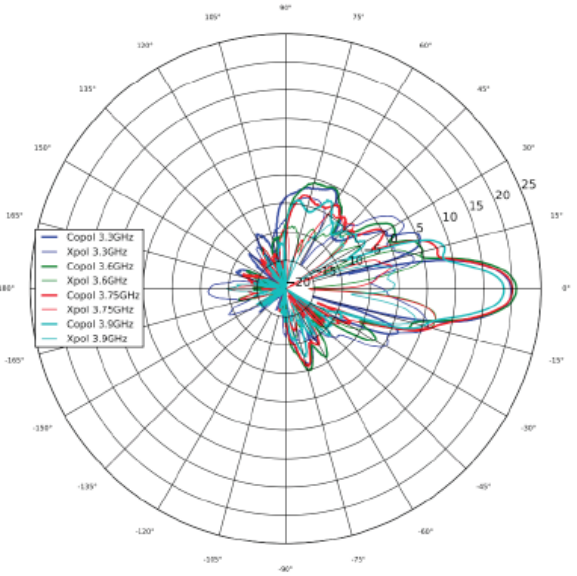
Azimuth, -45



Elevation, +45



Elevation, -45



ABOUT CAMBIUM NETWORKS

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences and device connectivity with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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